Best Practices in Treasury Management

Leading state and local treasurers have improved management practices affecting the fundamental areas of cash management: payment processing, investing, and disbursement control. This article summarizes significant changes in the treasury management arena.

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Within the financial management profession, perhaps no area is undergoing as great a transformation as treasury management. Forces such as the Internet are fomenting change in how state and local treasurers manage cash, indeed raising questions about the future of cash and checks as a means of payment. This article will shine light on the changes occurring within the treasury management field, with the caveat that what is considered best practices today may be dramatically different in a few years time.

Background

For the purposes of this article, best practices will be broadly defined to include a) management techniques, b) procedures, or c) applications of technologies that improve the cash management function **and** may be worth replicating in another jurisdiction. As a result, the focus will not be on one-time solutions that can be done in only one jurisdiction but on initiatives that can be repeated.

Best practices is a concept closely related to the notion of "recommended practices." The Government Finance Officers Association, through standing committees such as the Committee on Cash Management, develops recommended practices that give fundamental guidance to financial managers and advisers. These convey the accepted wisdom of experienced treasurers and cash managers on topics such as portfolio diversification, selection of investment advisors, and lockbox services. Best practices in this article are illustrated by case studies of recommended practices in action. In other cases, best practices represent entirely new management or technological approaches not yet addressed by a previously released GFOA recommended practice.

Selection of Best Practices

To catalogue best practices in treasury operations, the authors relied on existing GFOA research illustrating effective management techniques. For example, from the last four years the authors reviewed *Government Finance Review* articles, *Public Investor* articles, and previous GFOA Awards for Excellence. In addition, this research was supplemented with new information obtained from two telephone surveys of members of the GFOA Committee on Cash Management. The first survey was conducted in June 1999 and the second in February 2000.

In terms of functional areas, best practices were divided into a) accounts receivable or payment processing, b) accounts payable/disbursements, and c) investing. This is consistent with typology set forth in "Cash Management," *Local Government Finance: Concept and Practices*:

1) cash mobilization: Get the cash in as fast as you can…;
2) controlled disbursement: Release the cash at the last possible moment;
3) the investment program: Do something worthwhile with the cash in the meantime.

The article will review all three areas. However, the focus will tend to be on payment processing and less on investing and disbursing, for two basic reasons. First, much of the innovation has occurred in payment processing in recent years. Second, one government's investment process may be difficult to replicate since investment procedures are closely regulated by state law.

Payment Processing

Governments of all sizes have taken advantage of technological advancements that allow for more efficient handling of traditional forms of payment (e.g., cash and checks) and entirely new forms of payment (e.g., electronic funds transfer). Improving payment processing can yield gains in a) staffing efficiency and b) reductions in float. In general, float is the lag time involved in accepting a payment and processing it before it be invested.

Processing Checks. Lockbox check processing is certainly not a new technique. Nonetheless, surprisingly few local governments have adopted this service. For example, in a 1999 survey of mid-sized California municipalities, *Public Investor* found that only 33 percent of surveyed governments used a lockbox. The survey obtained responses from 93 percent of 42 California municipalities surveyed having populations between 75,000 and 125,000.

Lockbox service providers (either banks or other vendors) deploy equipment that convert manual tasks—mail opening, reading of checks, reading of remittances—into automated functions. By 1) using high-volume equipment and 2) obtaining large economies of scale from multiple clients (both municipal and private-sector clients), they are able to process transactions at a low unit cost.

GFOA Research Center staff observed first-hand one lockbox, which has a number of municipal clients. The City of Evanston, Illinois, for example, uses a "retail" lockbox for vehicle stickers that can be scanned using Optical Character Reader (OCR) technology. The vehicle sticker remittance forms are machine-readable, containing numbers similar to the Magnetic Ink Character Recognition (MICR) codes found at the bottom of a check. In summary, this lockbox is essentially a package of services that would ordinarily be done by a team of different municipal workers—namely, sorting mail,

Exhibit 1

Forms of Payment	Volume
Check	18 billion (1995)
Credit Card	15 billion (1995)
ACH	4 billion (1996)

Note: Check statistics are for checks processed by the Federal Reserve and three private clearinghouses.

opening mail, recording payments, preparing payments for deposit, and verifying the accuracy of moneys to be deposited. Furthermore, banks can MICR-encode checks for internal bank processing and upload account receivable data to its government clients.

Processing Cash. As in other fields, technology has increased the efficiency and accuracy of receiving, receipting, tracking and posting cash. While computerized cashiering systems—also called point-of-sale systems—have been available for some time in the private sector, the same type of system was not commonly available for the public sector. This has changed.

There are several companies that provide cashiering solutions designed specifically for the public sector. These solutions not only give cashiers the ability to collect various forms of payment such as cash, checks, and credit cards, but they also allow split payments such as a combination of cash and check. In many cases, these solutions can be interfaced with customer information systems and used to automatically update an account as paid.

Perhaps the biggest benefit of these systems is the ability of the applications to be linked, via programming interfaces, to a government's general ledger. In so doing, the government eliminates manual journal entries—reducing redundant data entry and increasing accuracy.[1] Accuracy also is ensured because each payment type may be assigned a processing code that automatically assigns the funds to the proper account or accounts. Governments such as Douglas County, Nebraska, and the City of Phoenix, Arizona, have taken advantage of this technology to improve their cash handling.

Credit Card Payments on the Internet. Although credit cards have been a long-standing alternative to cash and checks, in just the last few years the explosion of Internet-based electronic commerce has given new impetus to using credit card and other electronic forms of payment. Even prior to the rise of e-commerce in the last few years, credit card use had risen nearly to the level of checks. For example, in 1995 the Federal Reserve and three private clearinghouses processed nearly 18 billion checks, whereas there were 15 billion credit card transactions (see Exhibit 1). This represents substantial growth in the use of credit cards since 1981, according the U.S. General Accounting Office.

Internet-based acceptance of credit cards is extremely rare in the public sector. Growth of credit card usage has been hampered by the view of some public finance officers that credit card costs—specifically the "interchange" fee based on the percent of the value of the transaction—outweigh the benefits. However, the general increase in the use of credit cards as cited above (indicating greater public demand for their use) and the specific use of them for Internet-based transactions will raise the benefit-cost ratio in their favor in the public sector. Furthermore, the costs appear to have declined as governments negotiate more favorable terms for credit card acceptance.

An important benefit of using credit cards that can be used to offset the associated interchange fees is immediate verification of funds availability. If set up properly, credit card transactions are verified—for available funds and authenticity—at the time of the transaction. This verification ensures that the credit card is good and automatically holds the funds. Furthermore, it eliminates the scenario of a payment (e.g., a check) being returned for non-sufficient funds, since the verification is done before the acceptance of the credit card payment.

The City of Sunnyvale, California, has implemented one of the first test cases of Internet-based transactions. This city has been issuing, and accepting payments for building permits ("e-permits") since 1999. The initiative requires no human intervention to execute the transaction. Because of the relatively high volume of permits issued, it will have important benefits in terms of the cash receipt process. Sunnyvale has coordinated its efforts with the neighboring city of Mountain View.

Sunnyvale and Mountain View each issue about 5,000 permits each year. Of these, 1,500-2,000 are routine permits that will benefit from this technology. They plan to expand use by partnering with hardware stores and other retail establishments. Eventually, they intend to use it for other types of permits and licenses as well.

A resident or business seeking a permit would do the following:

1) go the city's permit Web site;
2) give the address of a building needing a permit;
3) the Web site (using an underlying database) will automatically verify that the address is valid;
4) the contractor will identify himself/herself (e.g., homeowner or professional contractor);
5) if a frequent permitee is in the city's "membership" they can use a password to expedite step 4—data which will have been provided already by the contractor on previous permit requests;
6) the contractor identifies the type of building permit desired (1 of 18 types)
7) they go to a Web page to schedule an inspection time;
8) then there is a permit "summary" page (analogous to a "shopping basket" found on other retailers' Web sites) at which point the contractor is ready to pay;
9) if the contractor is ready to pay, he/she provides encrypted credit card information;
10) the credit card clearinghouse will authorize and make the payment;
11) a permit (to start work) is issued; and
12) the contractor can print out the permit on his/her printer.

An inspector will go to the site to issue a final permit.

The Sunnyvale officials did not quantify the costs, but since a major software company has donated consulting services, the officials expect them to be modest. Also, they have much of the infrastructure in place since they already have an established Web site (e.g., Web and database server).

In terms of benefits, city officials expect that it will save staff time, since it will require little "human intervention" to issue routine building permits. In addition, they noted that the convenience to residents and businesses will be significant, since they will not have to stand in line and can do it after business hours. Furthermore, cash availability should be accelerated since the payment will be made by credit card instead of check.

Electronic Fund Transfer (EFT). EFT represents another important alternative to paying by cash or check. While commonly accepted as a means for making payroll disbursements (direct deposit) and accepting large payments from federal, state, and county governments, relatively few use it to accept payment for municipal services like water.

EFT transactions are carried out through the Automated Clearing House (ACH) network.[2] The ACH network is a nationwide electronic payment and collection system used to make EFT financial transactions. It consists of ACH operators (including the Federal Reserve), banks, and other participating financial institutions.

The use of ACH payments has increased rapidly, recording a 55 percent increase from 1992 to 1996. The National Automated Clearing House Association reports that EFT transactions rose 15 percent from 1995 to 1996 alone (whereas check volumes rose 1 percent). As of 1996, four billion payments were made through the ACH network, according to the U.S. General Accounting Office.

ACH-based payments are an efficient payment, relative to other forms of payment. For example, the GAO reports that both parties to an ACH transaction incur costs of less than one penny whereas a Fedwire—the other primary form of Electronic Fund Transfer—costs the sender and receiver of a fund transfer 45 cents per transfer.[3] Furthermore, in interviewing GFOA members we confirmed that ACH costs to end user governments are low. For example, the City of Naperville, Illinois, pays 6.5 cents per transaction when residents make ACH debits for water utility service.

The Village of Carol Stream, Illinois, uses EFT for consolidated billing of water and sewer service. Thirteen percent of the approximately 10,000 water/sewer accounts pay via EFT debits to their bank accounts. The process is as follows:

1) Carol Stream sends an application to residents to enroll in EFT program (two times per year in water bills and in a "welcome packet" for new residents);
2) the resident sends in an application with a voided check;
3) an account clerk finds the water account number and bank account number from the application and enters it into the utility billing system;
4) information on the system for one applicant is batched/combined with other applicants for processing in the monthly billing cycle;
5) the account clerk "posts the file" to each account; the clerk must post payments to make it a complete file (i.e., applies a payment to an account so the system recognizes the accounts as being fully paid);
6) the village sends data to its bank as a batch file (it includes every ACH transaction for every account); and
7) at the next month's billing, the family's account goes from pending to active.

Activating an account is done without human intervention. Village staff noted that the above seven steps are performed quickly, about five minutes per new EFT account. However, there were significant start-up costs when the EFT program was begun. In the first three months of the program they went from having no EFT accounts to between 800 and 900 EFT accounts. The designated official was essentially dedicated to working full time for three months (but this official was the only staffer involved in program set-up, aside from the assistant finance director who coordinated certain tasks with the bank).

Some governments such as Naperville pay an explicit fee for the service, based on transaction volume. Others have the service incorporated into the general banking services, and so the costs are not segregated.

Reorganizing the Collection Function. The City of Saint Petersburg, Florida, took a holistic approach to improving the general collection function, and centralized all activities in a new collections division. Aside from creating in-house expertise in revenue raising, the reorganization had several subsequent benefits. For example, the collection division a) began benchmarking the delinquency rate in major revenues such as utility payments, b) took efforts to reduce the "float" or time involved in transferring state and county revenues to the city through electronic (wire) payments, and c) training other divisions in proper collection procedures. Instead of an ad-hoc approach where individual department developed cash handling procedures, the collections division instituted a city-wide cash handling manual designed to improve speed of collections and internal controls. Lastly, like Carol Stream cited above, Saint Petersburg instituted an automated debit program that allows the city to debit utility customers' bank accounts. For these efforts the city won the 1997 GFOA Award for Excellence.

Investment

Governments have improved investment performance and the internal controls over investments through collaborative efforts with other local governments and through partnerships with private-sector vendors. These are discussed below.

Joint RFP for Banking Services. As the banking industry becomes increasingly sophisticated, local governments are able to take advantage of new services to boost investment performance as well as techniques for managing cash inflows and outflows/disbursements. However, smaller governments outside metropolitan areas may escape the attention of banks that offer state-of-the art services. This was the challenge facing three local governments in central Illinois: the Town of Normal, the City of Bloomington, and Normal Township.

Their response? Inject competition into the procurement process by using a multi-government Request for Proposal (RFP). Just as local governments have formed purchasing cooperatives for more mundane goods and services, these three localities applied this concept to obtain sophisticated banking services. The challenge for the governments was to "stick together" through an involved, three-phase RFP process. In phase one, they laid ground rules for how the procurement was to be conducted, the primary one being that the banks responding to the RFP must make the same set of core services available to all three governments. Phase II involved getting the formal approval of the three councils of elected officials before even drafting the RFP. The final phase involved hammering out the text of the RFP, which resulted in a) obtaining pricing information based on the "compensating balances" method for basic banking services, and b) specific fees for optional services such as a lockbox.

Three years into the joint banking initiative, all three governments have realized important efficiencies. For example, Bloomington now enjoys a greater yield on deposits as well as armored car pick-up which obviously strengthens the internal control over cash, while the Town of Normal can now offer an automated debit program (similar to Carol Stream) and Normal Township has seen across-the-board improvements in banking services.

Privatization of Selected Investment Functions. The City of Ann Arbor, Michigan's chief financial officer faced a typical dilemma of finance officers: how do you manage your investment portfolio when you a) have competing demands on your time, b) have myriad duties including payroll, accounting, risk management, utility billing, and property assessment (in addition to investing), and c) lack specialized staff. The city responded by privatizing

selected investment functions while retaining oversight.

Privatization yielded the city a number of benefits, with perhaps the most important being a better, more reliable cash flow forecast. This allowed the city to pinpoint its investment horizon by constructing detailed two- and three-year histories of revenue flows and analyzing key variables (e.g., cyclical events like property tax inflows). In addition, the city's investment advisers a) obtain quotes for securities (exercising due diligence), b) provide periodic reports to the city council, and c) restructure and monitor the portfolio. Because of the improved cash flow forecasting and portfolio refinements which have lengthened maturities, the city has enjoyed a gain of about 180 to 240 basis points as of May 1999.

Investment Training Center. In 1999, GFOA presented the Award for Excellence in cash management to the State of Ohio Treasurer for the new Ohio Center for Public Investment Management (CPIM). The purpose of the center is to ensure that all local public funds managers are equipped educationally to carry out their duties. It also helps them meet a state mandate of continuing education. In terms of impact, Ohio officials estimate that a) 5,000 public fund managers were trained in 1997-98 and b) the training resulted in increased earnings. The curriculum addresses diverse topics and uses a multi-media approach to learning (including a game called the Bond Market Board Game requiring participants to model different fixed income investments, simulate investment performance, and build a diversified portfolio).

Parallel Competition. Hanover County, Virginia, uses two competing investment management advisors that separately manage two fixed-income portfolios of similar average maturity. Having two dedicated portfolios with separate investment firms enables the county to control investment fees and better monitor portfolio performance.

The county's portfolio fluctuates between $40 and $50 million. It selects two investment management firms to manage the funds through a request for proposal process every five years. Depending on various factors including performance, new inflows of money are allocated to one of the portfolio managers during the five-year period. The county has completed one five-year agreement and has just begun another five-year agreement.

The county treasurer described three benefits of parallel competition. First, he believes that in the bid process, the promise of ongoing competition resulted in a lower set of investment management fees. Secondly, during the life of the agreement it helps retard subsequent price increases and improves customer service and responsiveness (e.g., to requests for information on Fed actions affecting interest rates). Thirdly, it created, in essence, an internal benchmark or basis of comparison so that the two investment managers and the county can better monitor performance—in addition to external benchmarks such as the Treasurer of Virginia Local Government Investment Pool and short-term Lehman Brothers Bond Index. The primary downside is that it requires the county finance staff to do more work in coordinating and overseeing the firms.

Investment Tracking Software. Several software applications available for the public-sector track, analyze, and report on investments. Some of these solutions even allow the user the ability to make trades online by using the power of the Internet. GFOA members such as the City of Santa Monica, California, have installed these products, or are in the process of doing so.

The advantages of these software applications are threefold. First, they are fully compliant with all GAAP, GASB, or other accounting/legal requirements and practices. Generally, full-time programming staffs are dedicated to keeping these programs in compliance with all new requirements. Second, reporting—especially ad hoc reporting—is much easier with these commercial products. Third, specialized analysis tools provide an almost unlimited ability to provide "what if" analyses with relative ease.

Disbursements

Many of the technological advances improving the investment and payment processes have applications to disbursement activities as well. For instance, Automated Clearing House transactions have become commonplace for disbursing payroll under the direct deposit program.

Using Positive Pay to Deter Check Fraud. As mentioned, banks make an array of services available to localities that can improve the disbursement side of cash management, as well as the investing and receivables side. To deter check fraud, banks increasingly offer governments "positive pay" to enable local governments to nip in the bud fraudulent checks presented to a government's bank. Essentially, it allows a local government to compare its electronic file listing checks to be paid against its bank's file of checks "presented" and to be paid. Governments of all sizes such as Merrill, Wisconsin, (more than 100 employees) and Hollywood, Florida, (approximately 1,400 employees) have adopted positive pay and have incorporated it into their daily cash management procedures.

According to the chief accountant of the Hillsborough County, Florida, Sheriff's Office, the same computer technology that improves the financial operations of local governments has given access to even "small-time thiefs" who can easily and cheaply counterfeit checks. He notes that the U.S. Office of the Comptroller of the Currency has estimated check fraud losses at $12 to $15 billion annually. Because of the magnitude of the risk exposure, and because of the legal environment under the Uniform Commercial Code, governments have a significant potential for loss. In that context, the City of Merrill finance/technology director states that "Positive pay is perhaps the most significant weapon in the smaller government's hands for use in preventing state-of-the-art check fraud." □

NOTES

[1] The government's automatic journal entries to the general ledger can be accomplished in two ways: batch update and real-time posting. Of these two, batch processing enables governments to verify transactions before they are posted to the general ledger giving them the opportunity to catch errors before they "hit" the general ledger. With real-time posting, any errors in a single transaction may require reversing journal entries in the general ledger (plus every single transaction may require a separate journal entry).

[2] Alternatively, EFT payments are often done through the Federal Reserve Board's FedWire. This is typically for transferring larger dollar amounts.

[3] It is unclear whether this refers to the end users or the end users' banks.

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